

generating an entry designated as Delete in the temporary map tree.

Other aspects and features are set forth in the entire claims, which are incorporated herein by reference thereto.

5 BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 illustrates the network configuration according to one embodiment of the present invention;

Figs. 2(a)-2(b) are diagrams

~~Fig. 2 is a diagram~~ that helps any person skilled in the relevant art understand one embodiment of the present invention;

Figs. 3(a)-3(c) are diagrams

~~Fig. 3 is a diagram~~ that helps any person skilled in the relevant art understand one embodiment of the present invention, including the current map class, the temporary map class, and the directories under the respective maps;

Figs. 4(a)-4(d) are diagrams

~~Fig. 4 is a diagram~~ that helps any person skilled in the relevant art understand how the configuration could be changed according to one embodiment of the present invention;

Fig. 5 illustrates an example of the format of the data described in the request that is passed from any external application to the network configuration data control means according to one embodiment of the present invention;

Fig. 6 is a flowchart that depicts the process of generating an entry in the temporary map tree according to one embodiment of the invention;

Fig. 7 is a flowchart that depicts the process of generating an entry designated as Add in the temporary map tree

according to one embodiment of the present invention;

Fig. 8 is a flowchart that depicts the process of generating an entry designated as Modify in the temporary map tree according to one embodiment of the present invention;

5 Fig. 9 is a flowchart that depicts the process of generating an entry designated as Delete in the temporary map tree according to one embodiment of the present invention;

Figs. 10(a) - 10(b) and 10(a') are diagrams

~~Fig. 10 is a diagram~~ that helps any person skilled in the relevant art understand the process of generating a new current map according to one embodiment of the present invention;

10 Fig. 11 is a flowchart that depicts the process of merging the current map tree and temporary map tree to produce an updated version of the current map tree stored on the directory server;

Figs. 12(a) - 12(c) are flowcharts

~~Fig. 12 is a flowchart~~ that depicts the process of deleting, modifying, and adding an entry under the current map entry during the current and temporary map merging process (Fig. 11) according to one embodiment of the present invention;

Fig. 13 illustrates the network configuration according to a second embodiment of the present invention;

20 Fig. 14 is a flowchart that depicts the process according to the second embodiment of the present invention;

Fig. 15 illustrates the network configuration according to a third embodiment of the present invention;

Figs. 16(a) - 16(b) are diagrams

~~Fig. 16 is a diagram~~ that helps any person skilled in the relevant art understand the third embodiment of the present

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invention;

Figs. 17(a)-17(c) and 17(a') are diagrams

~~Fig. 17 is also a diagram~~ that helps any person skilled

in the relevant art understand the third embodiment of the

present invention;

Figs. 18(a) - 18(c) are flowcharts

5 ~~Fig. 18 is a flowchart~~ that depicts the process of deleting,

modifying, and adding an entry under the current map entry

according to the third embodiment of the present invention; and

Figs. 19(a) - 19(b) are flowcharts

~~Fig. 19 is a flowchart~~ that depicts the process of

generating an entry designated as Add or Modify in the log map

10 according to the third embodiment of the present invention.

[0016]

PREFERRED EMBODIMENTS OF THE INVENTION

The embodiments of the present invention are now described.

Referring to Fig. 2, individual network components in the

15 present invention may be stored as nodes that are organized into

the tree structure called as the "network map", having the

directory entry as a root.

[0017]

In one preferred embodiment, the system according to the

20 present invention includes a directory server (2) on which a

current map tree (21) and a temporary map tree (22) may be stored,

wherein the current map tree (21) contains the current network

configuration information organized into the tree structure,

and the temporary map tree (22) only contains the information

25 for those network components, organized into the tree structure,